



MINISTERSTVO
FINANCIÍ
SLOVENSKEJ REPUBLIKY

2022 Investment Assessment Report

January 2023



Economic assessment of planned public investments belongs among the tasks of the Ministry of Finance of the Slovak Republic. The 2022 Investment Assessment Report summarises the obligations and results of the investment assessment pursuant to Section 19a of Act No. 523/2004 Coll. on Budget Rules of the Regional Self-Administration and of Amendments and Additions to Certain Acts, or on the basis of Task C.5 of the Government Resolution No. 649/2020.

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Abbreviations used

BCR	Benefits to Costs Ratio, the ratio between economic benefits and costs
DPS	Dynamic Purchasing System
IP	Investment Plan
RRP	Recovery and Resilience Plan
SB	State budget
FS	Feasibility study
PP	Public Procurement
ZSSK	Železničná spoločnosť Slovensko
ŽSR	Železnice Slovenskej republiky

Executive summary

The ongoing investment management reform aims to increase the economic value of newly implemented investment projects and to obtain a higher return on every Euro. Key parts of the reform include economic assessments of projects before their implementation, setting of priorities and investment plans of ministries and inclusion of only ready and socially beneficial projects in the regional self-administration budget. Clear priorities and long-term plans will improve project preparation and increase the accuracy of investment budgeting.

In 2022, the Ministry of Finance assessed 246 projects and identified potential savings of €657 million. Assessments for a total of €10.3 billion (€16 billion including the project Modernisation of railway line Žilina–Košice) resulted in recommendations towards optimising the technical design and reducing the cost of projects. The Value for Money Department (ÚHP) recommended not proceeding with further preparation for only 5% of the projects. The median saving of the projects assessed was 6%.

Currently, all ministries with average annual investments above €20 million have a published prioritisation methodology and an investment plan for at least the next 5 years. However, the published methodologies and investment plans vary in their elaboration and some of them do not meet the quality criteria (e.g. the source of funding is missing or they do not cover all types of investments). In some cases, investment plans do not correspond to the actual budget drawdown in the course of the year. The MF SR comments and makes recommendations on the methodologies and plans in order to update them to ensure the objectivity of the prioritisation of investment projects and to better link the plans to the budget.

The reform includes the principle of zero-based budgeting introduced from 2021. Only ready and socially beneficial projects should be financed in accordance with the prioritised investment plans and within the scope of the available budgetary resources in each individual year. Inaccurate planning and frequent changes in priorities in the past have led to unprepared projects blocking a large pot of money for a long period of time at the expense of ready and better investments across sectors.

In addition to the assessment of investment projects, in 2022 the MF SR dealt with investment issues that, if properly implemented, can bring significant savings: increasing the efficiency of project assessments by adjusting the assessment threshold, analysis of compensation for inflationary growth in contracts, and the methodology for prioritising the renovation of public buildings.

- **Changing the project assessment threshold can bring more added values.** Lowering of the threshold to €1 million in 2020 has led to a significant increase in the number of assessments with questionable added value. Small projects (below 10 million in IT and 40 million in other sectors) make up the majority of MF SR assessments, but they bring minimal savings and the MF SR comments have been incorporated in less than half of the cases. The analysis has a greater added value in the case of larger projects, capturing them at a stage when there is room to consider other alternatives and re-evaluate technical solutions. Unifying the project investment assessment threshold at 10 million would enable the focus to be on priority projects with potentially higher savings.
- **Slovakia still lacks uniform guidelines on when state contracts should contain an inflation clause.** A series of crisis events has increased the pressure to develop standards for the compensation of inflationary growth in state contracts. One of the solutions involves an inflation clause to minimize the risk of excessive increases in the contractor's costs for critical items. At the same time, the state should also benefit from price decreases, not just offset increases.
- **The renovation of state buildings is not coordinated and has no prioritisation.** The state administration owns almost 10 thousand buildings, approximately 75% of which are in need of renovation, with total estimated costs in the billions of euros. Today, these buildings produce more than 0.5% of the total greenhouse gas emissions in Slovakia. The Ministry of Finance of the Slovak Republic (ÚHP) has therefore prepared [a methodology](#) for the systematic renovation of buildings with the highest value for money.

1 Management of public investment in 2022

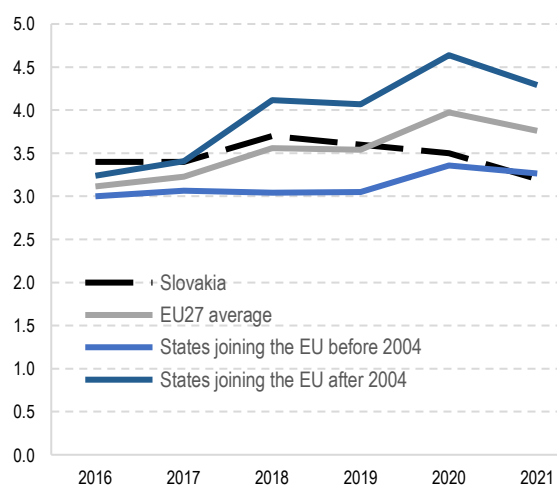
The reform of investment management has been underway for two years, during which the Ministry of Finance has been working to increase the value of newly implemented investment projects. Since then, more than 500 projects have been subjected to an economic assessment by the MF SR, the priorities of the ministries have been set, and methodologies and investment plans have been published. Thanks to the [Methodology for the preparation and assessment of investment projects](#), the investment process is clearer, but Slovakia is still far from the goal.

1.1 How much Slovakia invests

Over the last ten years, capital expenditure has averaged at 3.8% of GDP, which is comparable to the European Union average (3.6%). However, differences in investment intensity exist between Member States, with more advanced economies investing less on average. Since 2016, Slovakia has been lagging behind similarly developed countries that joined the EU after 2004.

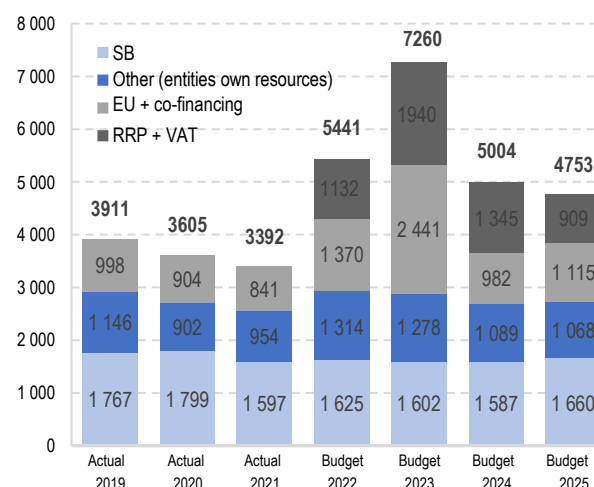
The Slovak Republic plans to invest €1.8 billion more in 2023 than in 2022. The investment envelope will increase by over €3 billion next year compared to the 2019 – 2022 average. The increase is mainly due to the new resources from the Recovery and Resilience Plan and the running-down of European funds.

Graph 1: Comparison of the amount of public investments in the EU (% of GDP), accrual basis



Note: Gross fixed capital formation Source: Eurostat data

Graph 2: Capital expenditure of regional self-administration (€ mil), cash basis



Source: processed by the MF SR based on State Treasury

The final amount of capital expenditure drawn down from EU funds may be affected by the transfer of part of the resources to expenditures outside the area of investment. Based on current discussions with the European Commission, it is possible that funds for delayed projects will be redirected to other priorities (e.g. expenses related to the energy crisis).

New resources from the Recovery and Resilience Plan are also linked to the significant increase in capital expenditure. However, the Recovery and Resilience Plan expenditure is not broken down into specific capital projects in the budget. For example, within the "Modern and accessible healthcare" component, €391 million is planned for 2023 but the sum is not broken down, therefore it is not possible to determine the timetable or the scope (volume) of the construction or reconstruction of specific hospitals. As a result, budgeting is less accurate and monitoring of the preparation and implementation of specific projects is more difficult.

Planned capital expenditures of the state budget chapters (excluding e.g. municipalities and higher territorial units and own resources of state enterprises) in 2023 amount to almost €6 billion. The state budget will cover EUR 1 602 million, and the remaining EUR 4 344 million will be covered by the EU funds (including national co-financing) and the Recovery and Resilience Plan (including VAT expenditure).

Table 1: Total capital expenditure excluding self-governments (€ mil)

Chapter	Average 17 -	2017 A	2018 A	2019 A	2020 A	2021 A	2022 A	2023 B	2024 B	2025 B
Total	2 371	1 542	2 384	2 832	2 654	2 440	2 703	5 946	3893	3678
SB	1419	886	1 197	1 786	1 662	1 562	1 643	1 602	1 587	1 661
EU + cofin.	952	656	1 188	1 046	992	878	1 057	2 404	961	1 108
RRP + VAT	0	0	0	0	0	0	3	1 940	1 345	909
MDV SR	832	745	993	688	807	929	856	1 625	1 512	1 226
MO SR	410	151	237	610	515	539	776	319	140	208
MIRRI SR	196	0	0	0	140	253	237	80	125	56
MŽP SR	222	131	310	301	233	134	209	1 601	256	390
MH SR	106	24	116	182	107	98	79	418	53	42
MZ SR	89	16	79	159	100	93	55	438	445	279
MV SR	114	86	163	143	96	82	128	67	57	29
MŠVVŠ SR	67	91	62	65	48	69	92	372	88	83
SŠHR SR	35	7	3	5	108	54	9	0	0	0
MF SR	75	67	81	109	65	53	58	26	31	25
MK SR	31	29	31	34	37	26	59	26	14	4
MPRV SR	170	120	171	285	247	25	39	4	4	4
VPS	47	12	56	78	73	17	3	598	994	1 199
MS SR	23	25	26	23	23	17	17	196	45	7
MPSVR SR	8	6	5	8	12	10	22	70	64	64
MZVEZ SR	12	7	11	33	3	7	13	10	2	2
Others	51	26	41	111	41	34	35	95	62	61

Note: A = actual drawdown, B = budget (plan) Source: MF SR

The major investment projects are planned in transport and defence. Expenditure on defence is primarily based on commitments related to NATO membership and is earmarked for the modernisation of equipment (purchase of fighter jets or armoured fighting vehicles). In transport, large-scale construction of road infrastructure and railway modernisation is underway.

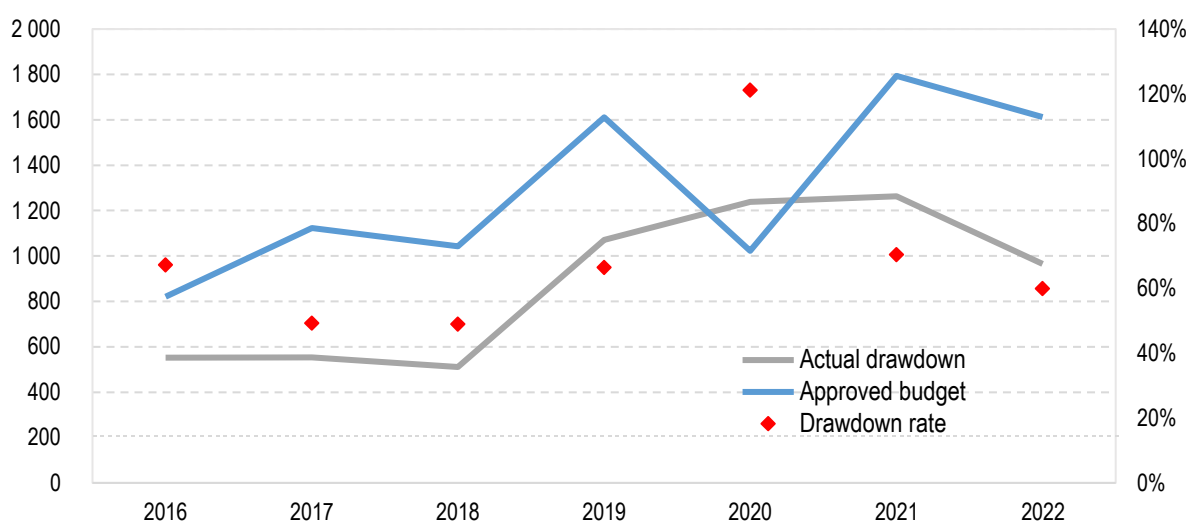
Table 2: 15 largest investment projects in 2023 (€ mil)

Project name	Chapter	Source	Total cost	By 2023	2023	2024	2025	After 2025
Modernisation of the railway line Devínska Nová Ves – state border	MDV SR	SB, EU	276	41	205	30	0	0
Multi-purpose tactical aircrafts (F-16 fighters)	MO SR	SB	1 652	1 226	189	79	158	0
Construction of the Lietavská Lúčka – Višňové – Dubná Skala	MDV SR	SB, EU	269	135	91	27	3	13
Construction of the expressway section Kriváň – Mýtina	MDV SR	SB	319	74	78	114	40	14
Modernisation of the railway vehicle fleet (Part 3)	MDV SR	EU	76	8	69	0	0	0
Construction of the motorway section Hubová – Ivachnová, phase II	MDV SR	SB	501	345	53	81	1	21
Modernisation of the railway vehicle fleet (Part 7)	MDV SR	EU	77	27	50	0	0	0
Construction of the expressway section Šaca – Košice Olšany, section II	MDV SR	SB, EU	207	70	47	49	31	10
Construction of the northern bypass of Prešov, stage I	MDV SR	SB, EU	200	142	45	5	0	8
Modernization of the railway line Čadca - Svrčinovec - state border SK/CZ	MDV SR	SB, EU	88	25	42	21	0	0
Construction of D1 Bratislava – Triblavina	MDV SR	SB	150	23	39	34	32	22
Construction of the expressway Tvrdošín - Nižná	MDV SR	SB, EU	77	35	39	0	0	3
Electrification of the line Haniska pri Košiciach – Moldava nad Bodvou	MDV SR	SB, EU	72	33	39	0	0	0
3D medium-range radars	MO SR	SB	75	33	35	7	0	0
8x8 armoured fighting vehicles	MO SR	SB	404	61	0	100	117	127

Source: MF SR (ÚHP), chapters' documents for the preparation of the regional self-administration budget 2023-25 and economic assessment of the projects by the MF SR

In Slovakia, the problem of capital expenditure absorption persists. The year 2022 was notable for a sharp increase in the price of materials on the market, which resulted in the cancellation or renegotiation of contracts for investment projects. The preparation and procurement and implementation phases need to be improved to make drawdown more efficient. In the planning and preparation phase, high-quality investment plans linked to budget preparation and prioritised socially beneficial projects are indispensable. In the procurement and implementation phase, poorly prepared tender documents or necessary changes to the technical design are among the problems, leading to delays in deadlines and non-compliance with the work schedule.

Graph 3: Development of investment expenditure drawdown (source SB), in € mil and the ratio to the budget



Source: MF SR (ÚHP)

Investments will yield the expected results only if resources are systematically allocated to the best projects. The economic value of most investment projects assessed by the MF SR only slightly exceeded their costs. This is reflected in the project benefit-cost ratio (BCR), which in Slovakia averages up to 1.5. In the UK, a ratio greater than 2 is considered the minimum standard, depending on the type of project. In Slovakia, only around 30% of investment projects assessed by the MF SR reached such a level. A better investment process will systematically increase the share of projects with a high social value.

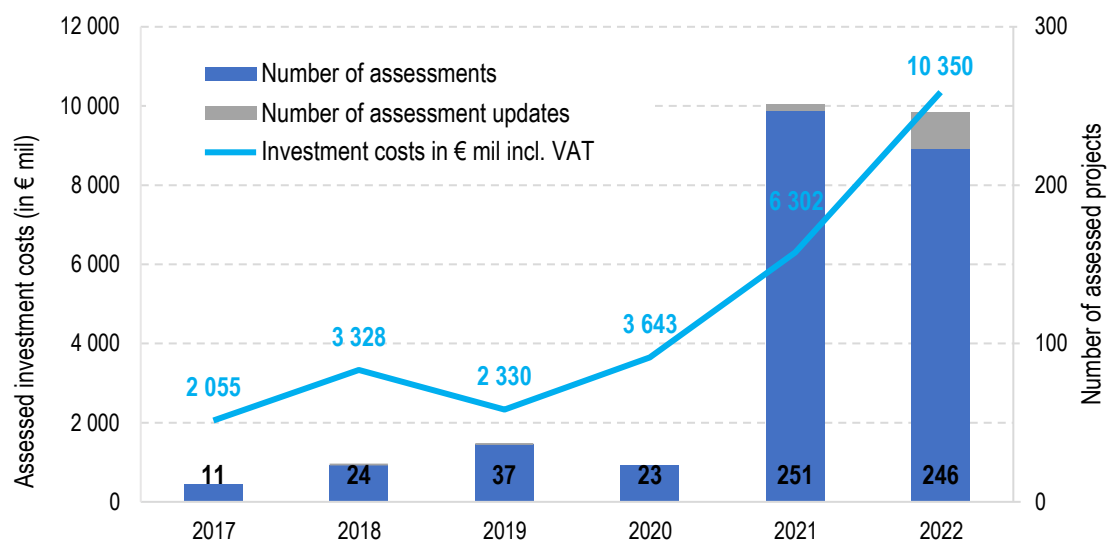
1.2 The MF SR assessed 246 projects and identified potential savings of €657 million

In 2022, the Ministry of Finance of the Slovak Republic assessed 246 projects with identified potential savings of €657 million. The MF SR currently assesses all investment projects of ministries and their organisations above €1 million, regardless of the source of funding. The assessments focus mainly on the justification of the project, its scope, consideration of alternatives and designing ideal technical solutions. Estimates of the costs and benefits of the project are verified. Mandatory economic assessment of projects has been progressively introduced in practice since 2016¹.

Assessments for a total of €10.3 billion (€16 billion including the project Modernisation of railway line Žilina – Košice) resulted in recommendations towards optimising the technical design and reducing the cost of projects. The higher amount of assessed investment costs compared to previous years is mainly due to the update of the assessments of defence projects (e.g. procurement of tracked armoured fighting vehicles and tracked armoured vehicles for €1.7 billion) and the assessment of strategic transport and construction investments (e.g. construction of a new university hospital in Martin for €400 million). The median savings of the assessed projects is 6% of the estimated costs and most of the projects were recommended for implementation with modifications to the technical solutions or with adjustments to the cost estimate. Only less than 5% of the projects in 2022 were not recommended by the MF SR to proceed with further project preparation.

¹ Major projects above EUR 40 million or EUR 10 million in IT are assessed on the basis of a mandatory feasibility study. Both the publication of the study and assessment by the MF SR are legal obligations. The assessment of minor projects above EUR 1 million was introduced at the end of 2020 by a resolution of the Government of the Slovak Republic and is considerably simplified compared to major projects.

Graph 4: Assessed projects 2017 - 2022



Source: MF SR (ÚHP)

In 2022, the MF SR updated the assessments for 23 projects that had already been assessed in previous years. Updates of assessments are prepared for major projects² before the start of procurement and before the contracts are signed. The pre-procurement update mainly aims at assessing the stated estimated value of the contract and incorporating recommendations from the previous assessment. For example, the project for the procurement of 8x8 and 4x4 armoured fighting vehicles was assessed for the first time in 2017 and underwent an update in 2022.

Projects in transport and buildings make up the largest part of the assessments. Transport investments mainly include projects for the construction of new roads, modernization of existing roads, reconstruction of railway lines, and purchase new trains. Most of the investment costs of the building projects assessed in 2022 are for the construction and renovation of hospitals - F. D. Roosevelt University Hospital with Polyclinic in Banská Bystrica and construction of a new university hospital in Martin.

- In the defence sector, projects are primarily based on commitments related to North Atlantic Treaty Organisation (NATO) membership, mainly the purchase of new combat equipment and upgrade of military infrastructure.
- IT projects mainly focus on modernisation of existing and the purchase of new systems within the regional self-administration, procurement of licences or hardware.
- In the health domain, mainly the purchase of medical equipment has been assessed so far.
- In the field of 'automotive', projects for the purchase of vehicles or fleet renewal have been assessed.
- Most of the projects in the category 'others' include projects for the purchase of special equipment or specific projects of the Ministry of the Environment.

² over €10 million in IT or over €40 million in other areas

Table 3: Assessed Projects in 2022 by sector and with average savings per project (in € mil)

Area	Number of projects	Investment costs in € mil	Identified savings	Average identified savings per project	
				At the start of Preparation	Before PP
Total	246	10 350	657	15.9	0.9
1 investment > 10/40 M€	39	9 246	532	15.9	7.0
2 investment > 1 M€	207	1 104	125	N/A	0.6
Transport	50	5 539	469	24.2	3.6
1 investment > 10/40 M€	18	5 286	399	24.2	15.1
2 investment > 1 M€	32	254	70	N/A	2.2
Buildings	58	1 720	129	21.2	2.4
1 investment > 10/40 M€	6	1 453	115	21.2	8.7
2 investment > 1 M€	52	266	14	N/A	0.3
IT	78	571	29	0.9	0.3
1 investment > 10/40 M€	12	298	8	0.9	N/A
2 investment > 1 M€	66	272	21	N/A	0.3
Cars	18	217	18	9.9	0.5
1 investment > 10/40 M€	1	66	10	9.9	N/A
2 investment > 1 M€	17	151	8	N/A	0.5
Defence	8	2 202	4	N/A	0.7
1 investment > 10/40 M€	2	2 142	0	N/A	N/A
2 investment > 1 M€	6	60	4	N/A	0.7
Medical equipment	16	53	4	N/A	0.3
1 investment > 10/40 M€	0	0	0	N/A	N/A
2 investment > 1 M€	16	53	4	N/A	0.3
Others	18	48	4	N/A	0.2
1 investment > 10/40 M€	0	0	0	N/A	N/A
2 investment > 1 M€	18	48	4	N/A	0.2

Source: MF SR (ÚHP)

When assessing transport projects at the beginning of the feasibility study preparation, the MF SR assessment focuses mainly on the technical design of the project and the selection of a suitable alternative. A detailed project budget is often not available at this stage, so potential savings are difficult to quantify, and the added value of the MF SR lies primarily in determining whether the study is actually examining the most optimal solutions. For example, the assessment of the modernisation of the Bratislava – Komárno railway line, with a cost of almost one billion euros, took place at the beginning of the project preparation which allowed alternatives to be reassessed and the scope to be adjusted according to real demand. As a result, costs can be reduced by up to hundreds of millions of euros in the next stages of preparation.

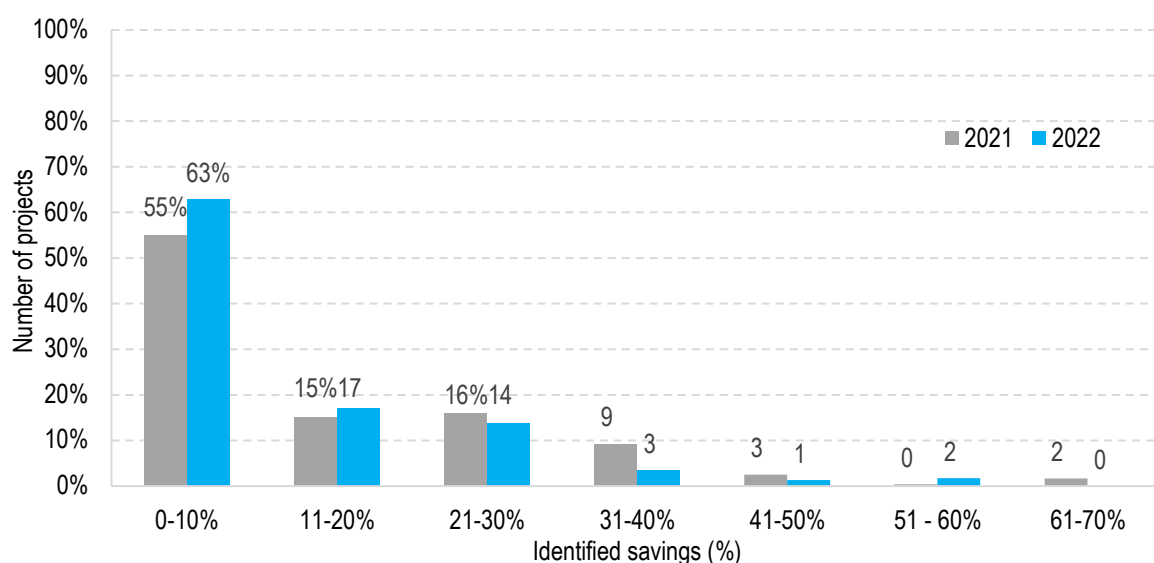
In 2022, the MF SR assessments identified potential savings of €657 million. The greatest savings potential or potential for changes lies in major projects at the beginning of preparation. Major projects are assessed for the first time at the outset, during the feasibility study preparation as there is room to consider other alternatives and reassess the technical solutions and the scope of the project. During this phase, a potential saving of €463 million was identified (saving per project of €15.9 million). In the initial phase, the investor is able to process comments more easily with minimal expenditure and the savings potential is therefore much greater. Major projects are assessed a second time before public procurement (PP). All minor projects (above €1 million) are also assessed at this point. Potential savings before the PP are identified mainly by comparing unit costs based on the prices of completed projects and in 2022 amounted to €194 million (€0.9 million per project). Minor projects are only assessed prior to the call for tenders when there is already a little room for changes and the investor is often in a time crunch. Examples of assessments and potential savings during project preparation:

- In the case of the construction of a new railway line section Nitra - Trnovec nad Váhom, instead of the construction of a new railway line for almost €400 million, the MF SR found the repair of the current railway line and the introduction of direct trains in the direction BA-NT to be a more optimal solution for approximately half of the cost and without loss of speed.

- During the assessment of the building for employees of the Government Office of the Slovak Republic (Čajka), the MF SR identified a potential saving of EUR 12 million (26% of the project amount) by reducing the overall size of the above-ground structure and by reducing the number of parking spaces.
- Development of the University Hospital with Polyclinic of F. D. Roosevelt in Banská Bystrica might be cheaper by €60 million (13% of the project amount) if the planned spatial efficiency (140 m² per bed with 859 beds) is maintained, the number of beds is achieved in accordance with the capacity model and unnecessary parking areas are reduced
- During the assessment of the IT project digitisation and modernisation of the electronic services of state archives in the European context, the project's costs were reduced from the original €20 million to €5 million by utilising existing capacities.

The MF SR does not report savings in purchases of defence equipment due to non-public documents and unit prices. In other sectors, it is now unthinkable. Unit prices are key information in any investment and should be disclosed to the greatest extent possible, including in the defence sector. In order to be able to assess even major defence projects consistently, it is necessary to strive for the greatest possible disclosure and comparability of offers. A feasibility study should include, for example, a comparison of the costs and parameters of vehicles supplied by manufacturers to other countries, selection, description and assessment of alternative solutions, and a financial analysis and an economic analysis comparing a number of alternatives.

Graph 5: Identified potential savings in 2021 and 2022



Source: MF SR (ÚHP)

The identified potential savings above 50% represent projects where the MF SR recommended only part of the project to be implemented and at the same time, the unit prices were overestimated in the budget. In 2022, these were mainly small transport projects where more efficient solutions have been identified.

In 2022, the MF SR identified 29 projects with a total amount of €192 million for which the contracting authorities failed to fulfil the task of submitting the project for assessment 30 days prior to the public procurement. Following an additional request, the documents for 21 projects assessed by the MF SR before the contract was signed were submitted retrospectively. Ministries failed to submit the documents for the assessment of 8 projects even after the request. These projects are described in detail in Annex 1.

Compared to 2021, the number of entities failing to comply with the obligation to submit a project for assessment before the call for tenders has decreased. At the same time, the number of projects for which the contracting authorities failed to provide supporting documents even after the request of the MF SR has increased.

Table 4: Overview of the ministries that have launched a public procurement procedure without an assessment by the MF SR

Ministry	2021		2022	
	Number	Amount in €	Number	Amount in €
Total	47	338.2	29	192.3
MDV	11	69.7	1	12.2
MZ	5	23.2	3	8.4
MV	5	76.9	8	80.4
MŽP	5	27.9	2	3.9
MŠVVŠ	4	45.3		
MK	3	29.3	1	1.3
MO	3	5.2	2	18.6
MPRV	3	15.3	2	3.7
MZV	1	7.6		
MIRRI	1	2.6	3	17.8
MS	1	4.5	1	9.7
MF	1	2.1		
MPSVR	1	8.7	1	26.1
Other	3	20.0	5	10.1

Note: Amounts including VAT

Source: MF SR (ÚHP)

1.3 Why it is important to have up-to-date methodologies and plans

A quality investment plan helps chapters to get more investment projects into their budget limits and helps to prepare projects without delays. The Ministry of Culture is an example of a ministry that has included only high-quality and prepared projects in its investment plan. As a result, all the projects in the investment plan have been broken down to their limits and funding has been secured for these priority projects.

Clear prioritisation and methodologically based investment plans increase the transparency and predictability of the investment process and are an important part of the reform. Currently, all chapters with annual investments above €20 million have a published prioritisation methodology and an investment plan for at least the next 5 years. They are being prepared due to the need for better and more realistic long-term investment planning. The obligation to prepare the documents also stems from [Resolution of the Government No. 649/2020](#), [Resolution of the Government No. 577/2021](#) and the task set out in the Recovery and Resilience Plan. Published plans need to be updated to ensure that they are realistic in relation to government revenues, have well estimated costs and take account of priorities.

Table 5: Status of methodologies and investment plans elaboration

Ministry	Prioritisation methodology	Investment plan
MDV SR - roads	Published	Published
MDV SR - railway lines(ŽSR)	Published	Published
MF SR	Published	Published
MH SR	Published	Published
MIRRI SR	Published	Published
MK SR	Published	Published
MO SR	Published	detail in classified mode
MS SR	Published	Published
MŠVVŠ SR	Published	Published
MV SR	Published	Published
MZ SR	Published	Published
MŽP SR	Published	Published

Note: overview of methodologies and plans is also published on the MF SR website https://bit.ly/investicie_metodiky.

Source: MF SR (ÚHP)

Currently, published investment methodologies and plans have different formats and some of them do not meet the quality criteria. Appropriately set criteria in the prioritisation methodologies make it possible to identify the most important projects. The assessment of investment methodologies takes into account whether the criteria are objective and whether the methodology covers all types of capital expenditure. At the same time, the list of projects arranged on the basis of priority as per the methodology must be published. As long as the inappropriate criteria do not exceed 10 % of the overall assessment, the methodology is considered to be of high quality.

The main challenges of current prioritisation methodologies include:

<p>The methodology does not cover all types of capital expenditures implemented by a given ministry</p>	<p>The Ministry's investment methodologies should cover all investments, regardless of the source of funding, type or size of the project. The Ministry may have several methodologies in place, depending on the specificities of different areas. However, it is a problem if it completely omits certain types of projects from its methodologies. For example, the MDV SR does not include capital expenditure in IT and buildings in its methodologies.</p>
<p>Inappropriate criteria used for project prioritisation</p>	<p>Methodology criteria are intended to objectively prioritise the project. Examples of inappropriately set criteria include the existing commitment (whether the project is contracted) or the readiness of the project documentation. These criteria do not reflect the quality and need of the project and should only be taken into account in the investment plan. For example, the MK SR methodology includes a project readiness criterion which should only be taken into account when planning the timetable in the investment plan.</p>
<p>List of projects arranged on the basis of priority according to the methodology is not published</p>	<p>The Ministry should publish a list of planned investments above €1 million including VAT with a priority determined on the basis of the methodology. For example, the MZ SR and several other ministries have not yet published a list of projects with points on the basis of methodology.</p>

Investment plans must contain realistic cost estimates and sufficient detail to be used for budget preparation. Criteria that a quality investment plan must meet include in particular clarity, correct prioritisation based on the methodology, a realistic amount of capital expenditure and also coverage of all expenditures. Currently, different chapters use different formats for their investment plans, which are often not machine-processable, without a uniform format and without key data (e.g. source of funding).

The main challenges of current investment plans include:

<p>The plan does not break down costs by year and funding source</p>	<p>Without a breakdown, plans cannot be used for budgeting and the predictability of investments is not improved (no timetable). The Ministry of the Interior's investment plan is one of the investment plans that do not include a breakdown of expenditure by year.</p>
<p>The plan is not in a machine-processable format</p>	<p>The clarity of the plan and its format are important for cross-cutting analysis and public awareness. If the investment plan is, for example, in .pdf format, working with its data becomes more difficult. The MŠVVŠ SR is among several ministries whose plan is in an inappropriate format.</p>
<p>The plan does not include minor projects below €1 million</p>	<p>Even projects below €1 million should be included in the investment plan, but they may be grouped under one item, or within groups of items, so that the plan includes the entire investment envelope of the chapter (e.g. IT, construction works, etc.). For example, the investment plan of the MS SR does not include such minor projects.</p>

The priority order of individual projects is not clear in the plan	The plan should clearly indicate the priority projects of the ministry. This is not possible if the projects do not have a defined priority, based on the methodology, or if several projects have the same priority.
Unrealistic amount of capital expenditure	The amount of expenditure is considered unrealistic if the difference compared to the average drawdown from the state budget source is more than 20%. For example, the MŽP SR shows a difference of more than 200% compared to the current budget amount.

In some cases, investment plans fail to reflect actual budget drawdown over the course of the year and thus fail to contribute to better investment planning. The MF SR is discussing improvements for the upcoming updates with the ministries so that the plans present an overall picture of the ministry's capital expenditure in the coming years and are linked to the regional self-administration budget. To illustrate the actual execution of the published plans, three plans published in 2021 were compared to the actual drawdown in 2022 (Table 6).

Table 6: Comparison of published investment plans with the actual drawdown in 2022 (€ mil)

Chapter	Source	Investment plan	Budget	Drawdown	IP fulfilment	Appraisal
MK SR	Total	55	37	49	90 %	In its investment plan, the MK lists projects that it can realistically implement and drawdown. The plan is correctly linked to the regional self-administration budget and to this extent can serve as a basis for its development.
	SB	55	36	49	90 %	
	RRP	0	1	0	0 %	
MŽP SR	Total	226	496	98	1 %	The investment plan does not match the budget.
	SB	33	1	3	8 %	
	EU	18	288	96	0 %	
	RRP	206	207	0	0 %	
MŠVVŠ	Total	464	418	62	13 %	The MŠVVŠ budget consisted of packages of projects (e.g. modernisation of schools), which seems only appropriate for this ministry. Projects in the investment plan need to be broken down by funding source.
	SB	Funds not divided in the IP	32	31	N/A	
	EU		62	31	N/A	
	RRP		325	0	N/A	

Note: The fulfilment of the investment plan is the ratio of the funds drawn down for the projects listed in the IP and the total amount of expenditure planned in the IP

Source: MF SR (ÚHP) on the basis of RIS and published IP

[The Ministry of Culture \(MK SR\)](#) has published projects with an expenditure of over €54 million for 2022 in the investment plan and financed 90% of the total amount. In the budget, the expenditure of almost EUR 37 million was approved for the projects included in the investment plan. The funds were spent on the investment actions for which they were earmarked. In addition, the MK SR has drawn a further €10 million from the reserve for other projects in the investment plan. This is an example of a plan that is realistic, transparent and linked to the regional self-administration budget.

[The Ministry of the Environment \(MŽP SR\)](#) has a published investment plan amounting to €226 million for 2022, but about 1% of these investments have been financed. More than twice this amount was approved in the budget, but only 40% of the investment plan expenditure was included. The rest of the budget was made up of projects outside the plan. Only €98 million was drawn down, i.e. 20% of the funds available to the chapter. The investment plan needs to be better linked to the actual planned budget of the chapter when it is next updated.

[The Ministry of Education \(MŠVVŠ SR\)](#) has financed 13% of the investment actions planned for 2022. It has a published plan containing projects and project packages (mainly school and sports ground renovations) for 2022 worth €464 million. €418 million has been approved in the budget, which represents 90% of the planned volume. The overall budget drawdown is at 15% due to the non-utilisation of the Recovery and Resilience Plan funds. The Ministry of Education has developed both a plan and a budget in the form of packages, which are then reallocated as needed during the year to specific investment actions. Thus, a direct deduction per action is not possible, but the purpose of the funds has been preserved. The MŠVVŠ SR implements a large number of minor projects from individual schools and organizations and the system of project package budgeting is appropriate for the ministry, despite the complexity of retrospective assessment. However, the plan needs to be broken down by funding source.

2 Investment topics for 2022

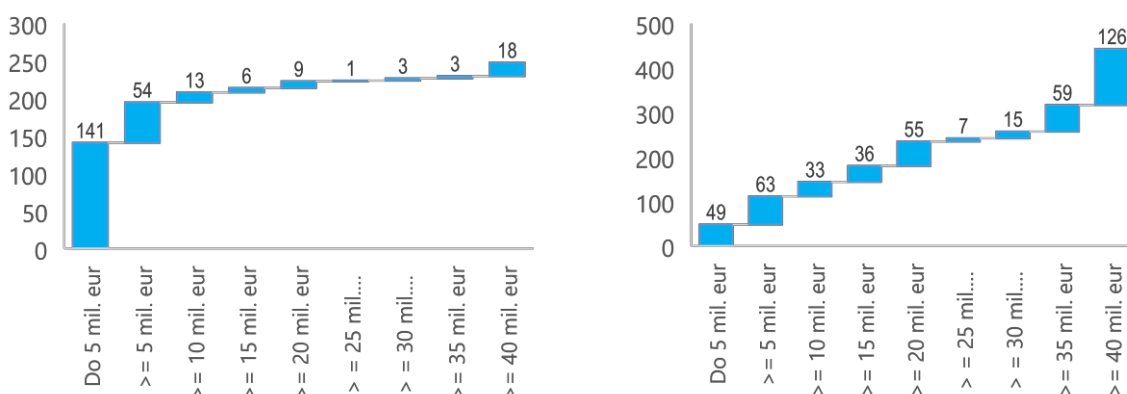
In 2022, the MF has addressed a number of investment issues that, if applied correctly, can bring potential savings to the state in the millions of euros and improve processes. For example, better set rules for project assessment by the MF SR would bring the opportunity to focus on strategic projects and topics with minimal loss of savings.

Inflation and the energy crisis have shaped the year 2022 and affected public investment. The MF SR has been exploring ways how the state can protect itself from spikes in materials prices. Well-set inflation clauses represent one of the solutions. At the same time, the high energy intensity of existing public administration buildings costs almost half a billion euros a year. Nevertheless, the state does not have a uniform approach to their renovation. [The methodology](#) for prioritisation of renovation of public buildings serves as a guide for priority determination when selecting buildings for renovation.

2.1 Changing the project assessment threshold can bring more added value

The Ministry of Finance (Value for Money Department) devotes most of its capacity for investment assessments to minor projects, which, however, generate minimal savings. Projects under €10 million comprise up to 80% of the total number of projects assessed but generate less than a third of the identified savings.

Graph 6: Number of assessed projects (left) and potential savings (right in € mil) for 2021



Source: MF SR (ÚHP)

Discussion regarding minor projects is minimal, and ministries often fail to incorporate recommendations. Only less than half of the minor projects have had the measures incorporated, while the percentage of major projects above €40 million has been 60% of the cases. This is due to the phase the project is in, when its economic assessment is carried out. Minor projects are assessed before the call for tenders when the technical design or scope of the project has already been decided. It is therefore more complicated for the investor to incorporate the recommendations from the assessments. On the contrary, in the case of major projects, the discussion about a project begins before the start of preparation, and thus it is easier to incorporate the comments.

The workload, cost savings and incorporation of comments suggest that the set-up of economic assessments requires change. Cancelling the assessments above €1 million and standardising the threshold for all projects seems to be one of the possible solutions. Investors would thus gain greater flexibility and time savings within the preparation of minor projects and major investments would be monitored from the start of project preparation. The MF SR's capacities allocated to the assessment of minor projects could be better used for major projects, strategic planning documents and could assist ministries in project preparation and the development of feasibility studies. The unification of the threshold would also clarify the legislative regulation, as the MF SR currently carries out assessments on the basis of Act No. 523/2004 Coll. (over €40 million) and at the same time on the basis of Resolution of the Government No. 649/2020 (over €1 million).

Table 7: Scenarios of the number of assessments and savings by the threshold setting (€ mil)

Threshold	Number (cumulative)	Savings (cumulative)	Average savings per project	Median savings per project
All projects	248	443	1.8	0.3
>= 1 mil eur	242	443	1.8	0.3
>= 5 mil eur	107	395	3.7	1.3
>= 10 mil eur	53	332	6.3	3.8
>= 15 mil eur	40	299	7.5	4.5
>= 20 mil eur	34	263	7.7	5.4
>= 25 mil eur	25	208	8.3	6.5
>= 30 mil eur	24	201	8.4	5.6
>= 35 mil eur	21	186	8.8	7.2
>= 40 mil eur	18	126	7.0	0.2

Source: MF SR (ÚHP)

For example, after the threshold adjustment to €10 million, the number of projects assessed in 2021 would decrease by 79% (from 246 to 52 projects), which is a decrease of €689 million, but the loss in savings would be only 28% (€111 million). The MF SR would probably assess fewer purchases of medical equipment, minor building reconstructions and IT projects.

Table 8: Overview of projects above €10 million in 2021 (in € mil) before and after threshold adjustment

Area	Current status			After the assessment threshold adjustment to €10 million		
	Number	Amount	Savings	Number	Amount	Savings
IT	78	560	75	9	249	11
Transport	73	2 566	274	32	2 411	236
Buildings	66	258	15	4	115	9
Defence	14	2 384	2	6	2 366	1
Others	6	136	15	1	123	14
Health	5	10	0	0	0	0
Cars	4	52	14	1	39	12
Total	246	5 966	395	52	5 277	284

Note: after threshold unification even with new entities

Source: MF SR (ÚHP)

The methodology currently sets the threshold according to the investment costs, but the expenditure for the whole life cycle of a project is often several times higher. Especially in the case of IT projects, the threshold between development and operation is often blurred, or the operation makes up the majority of project costs - for example, the purchase of licences with an investment cost of €8 million, but with a total project cost of €75 million. A possible solution would be to set the threshold according to the life cycle costs of the project.

2.2 Quality inflation clauses help with material price spikes

A series of crisis events has increased the pressure to establish standards for inflation compensation in government contracts. During the pandemic, prices spiked both domestically and internationally but were expected to decline in 2022. The war in Ukraine changed this assumption. The year-on-year increase in construction materials prices amounted to more than 30% in May 2022 compared to the same month in 2021. Unexpected further price increases, driven mainly by energy price spikes and ongoing problems in supply chains, have created pressure to establish standards to offset inflationary growth in state contracts as well. Abroad, an inflation clause is a frequently used precautionary measure against price spikes.

BOX 1: Inflation clause

An inflation clause in a contract allows the amount of money paid in the future or over a longer period of time to reflect the real value of money. It is relevant to contracts containing a pre-agreed price for the supply of the subject matter of the contract and the period of supply is sufficiently long to allow for a significant increase in costs on the part of the contractor without fault on his part.

The use of an inflation clause is not recommended for short-term contracts where there is an expectation of their completion up to 12 months from the submission of the offer. Cases where the delivery of the subject matter of the contract is primarily linked to materials and energy, the price of which cannot be objectively predicted in the light of the current situation, and the associated risk has a significant impact on the final price of the contract, may constitute an exception to this rule.

Slovakia still does not have uniform guidelines on when state contracts should contain an inflation clause. According to the Public Procurement Office's instruction, the contracting authority is obliged to proceed in such a way as to prevent, to the maximum extent possible, events that could fundamentally alter the performance of the contract. Specific advice on how to proceed in practice and an interpretation of the extent to which it is appropriate to minimise risk is missing.

Until 2018, the largest public sector investor (MDV SR) did not require its subordinate organisations to include an inflation clause in the contract for significant investments. Since 2018, the clause has been mandatory for constructions with a construction period longer than 730 days, and since 2022, the clause has been mandatory for all civil engineering constructions procured under the Public Procurement Act. Other ministries so far have used inflation clauses unsystematically and only in the case of major construction and defence equipment procurement; in the IT sector, inflation clauses are completely absent even in the case of multi-year projects.

The inflation clause should minimize the risk of excessive contractor cost increases for critical items. The contracting authority should avoid indexation of 100% of costs in most cases. Indexing of selected key items with a separate targeted index shall be an appropriate approach. Material and diesel indexing for construction projects provides an example. The specific indexation of individual items can also be taken into account in the form of a weighted index modelled on basis of the methodological instruction of the MDV SR No. 19/2022. The compensation of costs only up to a certain percentage limit of their increase is an interesting practice in foreign countries.

The state is supposed to benefit from price decreases, not just compensate for increases. If there is a significant price drop, the contract price must also be indexed downwards. The inflation clause should be used for the first time no sooner than six months to a year after the bid is submitted. In the case of short-term contracts for major construction projects, it is common to index the contract price on a quarterly or semi-annual basis, but the clause can also be triggered by cost developments. In the case of long-term contracts, indexation on an annual basis is customary.

The contract must clearly specify what will happen once the conditions for triggering the inflation clause are met. The contract must contain clear rules and a precise indexation procedure. Provision for agreement by both parties on compensation in the event of cost increases is considered a bad practice, which may increase the risk of disputes and withdrawal from the contract.

2.3 State buildings should be renovated on the basis of cost-effectiveness

Central government authorities manage almost 10 thousand buildings, whose poor condition is reflected

in high energy consumption. State buildings produce an estimated 0.5% of the total greenhouse gas emissions in Slovakia. The area of these properties amounts to over 6 million square metres, of which up to 50% is managed by the Ministry of the Interior and the Ministry of Health. Up to 75% of all properties require renovation at an estimated cost of billions of euros.

Table 9: Government buildings by ministries

	Number of	Area of buildings (m2)	Area in %
Ministry of Interior of the Slovak republic	3 826	1 808 682	30.1%
Ministry of Health of the Slovak Republic	931	1 206 568	20.1%
Ministry of Justice of the Slovak Republic	693	557 281	9.3%
Ministry of Culture of the Slovak Republic	362	372 075	6.2%
Ministry of Labour, Social Affairs and Family of the Slovak Republic	830	344 988	5.7%
Ministry of Defence of the Slovak Republic	557	318 417	5.3%
Ministry of Finance of the Slovak Republic	485	279 506	4.7%
MPRV SR	769	257 525	4.3%
Others	1 179	858 587	14.3%
Total	9 632	6 003 629	100%

Source: CEM, ÚHP

The renovation of state buildings is also essential for the sustainability of public finances. Energy costs form a significant part of the regional self-administration budget expenditure, amounting to €493 million in 2021. Buildings managed by ministries and other central government bodies (budget and contribution chapters) represent an expenditure of €123 million. A further increase is expected due to the rising energy prices after 2021.

The state administration lacks a systematic approach to the management of buildings, including their renovation. According to the Supreme Audit Office, the decentralised model, in which buildings are owned and managed by ministries, results in higher expenditure and poorer management due to a lack of coordination in the renting and selling of assets³. Even the renovation of state buildings is carried out solely on the basis of the preferences and financial possibilities of individual budget chapters, not on the basis of their benefits from the point of view of society as a whole. This can lead to inefficiency and the realization of renovations with low savings potential.

The sequencing of building renovation should be based on an analytically justified prioritisation. Due to the lack of data and incomplete passporting, this methodology cannot be applied to all government buildings. The MF SR methodology assesses buildings on the basis of the available resources of the central government authorities and proposes a prioritisation for two categories of buildings - office buildings and prisons - based on the criteria of consumption per square metre and total floor area. The prioritisation of office buildings is based on logarithmic regression, thanks to the availability of an extensive dataset on the renovations carried out. In the case of prisons, such data is not available and therefore only weighted consumption and area criteria are used. Other building types (e.g. hospitals) have not been prioritised due to lack of data.

The prioritisation of office buildings is based on the estimated investment cost per kWh of energy saved. Data from the renovation of buildings financed by the EnviroFund, available to the Slovak Innovation and Energy Agency, were used. Data on the date of renovation, building area, specific consumption before and after renovation, investment costs, etc. are available. Data on building renovations for the years 2017-2020 were used. Based on above mentioned data, the emission savings resulting from the renovation and the related investment

³ NKU report available online: <https://www.nku.gov.sk/documents/10157/1460168/MNOHO+ADRIES+%C5%A0T%C3%81TU.pdf>

costs can be calculated (BOX 2). Buildings with a lower investment cost per energy saving have a higher priority.

BOX 2: Estimate of the renovation costs

A logarithmic model has been developed to estimate the cost of renovation of office buildings, details of which are available in the table below.

Table: Logarithmic regression results

	<i>ln</i> (cost in € per kWh)
Coefficient	11.29281*** (0.629)
<i>ln</i> (consumption before)	- 1.06466*** (0.078)
<i>ln</i> (area)	- 0.79028*** (0.054)
Observations	133
*** p<0.001	

Both independent variables (consumption and area) are statistically significant at a confidence interval of less than 0.001. This indicates high degree of certainty that the correlation between the variables does not arise from chance. The R2 value is 0.68, so the independent variables can explain 68% of the variability in the dependent variable. These are very convincing regression results for this type of data, suitable for creating a prioritized list. Some of the remaining 32% of the variability could probably be explained by the number of floors of the building, the location, or the year of the last renovation or construction, but data are not available on these variables.

The Environmental Fund sample differs from the MDV SR dataset in building areas. As the EnviroFund beneficiaries are mainly municipalities, the areas of renovated buildings rarely exceed 2 000 m2 (Figure 2). However, due to the lack of data on renovations of larger buildings, the logarithmic regression predicts a further significant decrease in unit costs with increasing area. For this reason, the value of the area in m2 is capped at 3,000 m2 for the further purposes of this prioritisation. Hence, even buildings with a higher area have a maximum value of 3000 m2 as input to the regression.

The robustness of the model was tested also on two limited samples of buildings, where only buildings with a floor area greater than 250 and 500 m2 were included. The results of these models were very similar to the original model in terms of parameter values, R2 and also p-value. Thus, it can be concluded that the model is robust.

The prioritization of prisons is based on the average energy consumption per square meter and the area. Both of these criteria are given a weight (90 and 10%). Prioritisation of buildings without an energy certificate is calculated in four steps. The first is to calculate 0.9 times the real consumption per square metre divided by the maximum consumption per square metre in the sample. The second step is to calculate 0.1 times the building area divided by the maximum area in the sample. The third is to add the two numbers. The fourth step is to normalize this number. Normalizing the data will ensure that the priority value reaches a value between 0 and 1. No problems occurred in the performed tests (heteroskedasticity, normality of distribution, multicollinearity, etc.).

The prioritisation formula for certified buildings is calculated similarly, except for the divisor in the first part of the equation. In the case of a building that has an available energy certificate, this part of the equation uses the total energy consumption based on the certificate, increased by the average deviation between the total energy demand data and the actual consumption in our sample. The level of underestimation of the demand in the certificate compared to the real consumption results in the addition of the average deviation. Subsequently, this value is also normalised.

The prioritised list divides the buildings in both categories into five priority levels - highest priority, high priority, priority, low priority and non-priority. The order of the buildings is determined by the methodology, the individual levels are determined by deciles. The highest priority category includes the first and second deciles of the prioritised buildings, the high priority category the third and fourth deciles, etc.

Once the prioritisation is established, qualitative criteria can be used to select specific buildings for renovation. In addition to the readiness of the project plan, they may also include the state of disrepair, the status of the heritage building, or occupancy. Deviation from the quantitative criteria should only occur in justified cases. However, the possibility of selling the property and transferring staff should be considered as an alternative.

The methodology is designed to provide guidance to state building managers in prioritising projects for preparation and subsequent realisation. The aim is to establish a cross-departmental prioritisation of buildings that will allow the highest value-added projects to be implemented.

Annexes

Annex 1: Projects for which the supporting documents were not delivered to the MF SR even after request - detailed description

Table 10: Projects for which the supporting documents were not delivered to the MF SR even after request - detailed description

Ministry	Procuring Entity	Project	Costs (€ mil incl. VAT)	Detailed description
MO SR	Armed Forces Academy of general Milan Rastislav Štefánik	Reducing the energy intensity of buildings on the premises of the Armed Forces Academy of Gen. M. R. Štefánik - command building SO 02	1.6	The Armed Forces Academy announced on 7 March 2022 a public procurement for the construction works of the command building. The documents were additionally requested on 14 March 2022 but were not delivered within the deadline.
MPRV SR	National Forest Centre	Modernisation and completion of remote earth sensing workstation	2.3	On the 31 January 2022, the National Forest Centre announced a call for tenders for the supply of equipment and related services for the modernisation and completion of the remote earth sensing workstation. Following an additional request for documents, partial project documents were provided on 7 February. The contracting authority did not respond to the request for completion of the documents.
MPSVR SR	Ministry of Labour, Social Affairs and Family of the Slovak Republic	Computer equipment and consumables	26	The Ministry of Labour, Social Affairs and Family of the Slovak Republic announced on 30 March 2022 a call for tenders for the DPS of a selected range of products, in particular personal computers, printers, peripherals and accessories. An additional budget request was sent on 31 March 2022, the reply was received without supporting documents. The contracting authority did not reply to the request to demonstrate how the items and their quantities were determined.
MV SR	Ministry of the Interior of the Slovak Republic	Automated Border Control System (ABC gates)	1.3	The Ministry of the Interior of the Slovak Republic announced on 12 April 2022 a public procurement for an automated border control system, the request for additional submission of documents was sent on 19 April 2022. The documents were delivered only a few weeks after the end of the deadline for the submission of bids in the public procurement.
MV SR	Ministry of the Interior of the Slovak Republic	Supply and installation of compact structured cabling systems integrating data and voice transmission	5.4	The Ministry of the Interior of the Slovak Republic announced on 14 April 2022 a call for tenders for the supply and installation of compact structured cabling systems. Additionally, the documents were requested on 20 April 2022 but were not delivered.

Ministry	Procuring Entity	Project	Costs (€ mil incl. VAT)	Detailed description
MV SR	Ministry of the Interior of the Slovak Republic	Off-road quad bikes	1.2	The Ministry of the Interior of the Slovak Republic launched on 26 October 2022 two procurement procedures for the supply of off-road quad bikes for the needs of subordinate organisations totalling €1.2 million. Additionally, the documents were requested on 04 November 2022 but were not delivered.
MZ SR	University Hospital - St. Michael's Hospital, a.s.	Medical equipment - neurostimulators	5.9	University Hospital - St. Michael's Hospital, a.s. announced on 06 June 2022 a public procurement for a framework contract for the supply of neurostimulators. The documents were additionally requested on 09 June 2022. The response to the request did not contain the requested documents, and the contracting authority did not respond to a further email regarding unit prices.
Other	Institute of Archaeology of the Slovak Academy of Sciences	Information system of the Institute of Archaeology of the Slovak Academy of Sciences - data management	1.7	The Institute of Archaeology of the Slovak Academy of Sciences announced on 29 March 2022 a public procurement for the development of a new unified information system. After a request for documents on 31 March 2022 and a telephone communication, the contracting authority promised to deliver the documents for assessment. The contracting authority failed to deliver the documents.

Annex 2: List of assessed projects in 2022

The list of projects assessed in 2022 is available as a separate attachment in .xlsx format.